

## **I CLAIM AS MY INVENTION**

1. A method for manufacturing a straight strip lamination with a press, comprising the steps of:

providing in the press a die comprising a main slot punch, a separator punch, and a part feature punch;

activating the main slot punch and separator punches and deactivating the part feature punch;

with each strike of the press, feeding a strip into the die a first same step distance and repeatedly stamping with the main slot punch and the separator punch to create a plurality of slots with punched-out separations therebetween having a desired constant slot distance progression;

deactivating the main slot punch and the separator punch and activating the part feature punch, and feeding the strip into the die with a second step distance different than said first step distance and stamping with the part feature punch so as to create at least one part feature in said strip; and

deactivating the part feature punch and reactivating the slot punch and the separator punch and feeding the strip into the die with a third step distance equal to a difference between said first and second step distances, and stamping with the slot and separator punches.

2. The method according to claim 1 wherein following said third step distance, feeding the strip with said first same step distance and stamping with the slot and separator punches.

3. The method according to claim 1 including the step of providing a cut off-end contour punch in the die, deactivating the slot and separator punches and activating the cut off-end contour punch, and feeding the strip and stamping with the cut off-end contour punch.

4. The method according to claim 3 wherein the strip is fed prior to stamping with the cut off- end contour punch with a fourth step distance different than at least one of said first, second, and third step distances.

5. The method according to claim 4 wherein the fourth step distance is different than the first, second, and third step distances.

6. The method according to claim 1 including the step of providing said part feature as a T-slot.

7. The method according to claim 1 including the step of feeding the strip with opposed pinch rollers driven by a servo motor controlled by a program control.

8. The method according to claim 1 including the step of coiling a completed strip at an output of the die.

9. The method according to claim 1 including the step of producing linear motor straight strip laminations.

10. The method according to claim 1 including the step of providing the slot punch so that teeth are formed in two parallel strips.

11. The method according to claim 1 including the step of providing the die beginning at strip entrance end with the slot punch, followed by the part feature punch, which is then followed by the separator punch.

12. The method according to claim 11 including the step of following the separator punch by a cut off- end contour punch.

13. The method according to claim 12 wherein the cut off-end contour punch has a separator punch portion.

14. The method according to claim 12 wherein the cut off-end contour punch has a part feature portion.

15. The method according to claim 1 wherein the die outputs a continuous strip of completed lamination which is coiled, and then later the coil is uncoiled and separate strip laminations are punched from the continuous coil lamination.

16. A method for manufacturing a straight strip lamination with a press, comprising the steps of:

providing in the press a die having at least a slot punch and a part feature punch;  
activating the slot punch and feeding the strip into the die station with a constant

slot step distance to create a plurality of slots; and

when a part feature is to be punched, deactivating the slot punch, activating the part feature punch, and feeding the strip with a new step distance which is different than the slot step distance.

17. A method for manufacturing a straight strip lamination with a press, comprising the steps of:

a) providing in the press a die having at least a slot punch and a part feature punch;

b) activating the slot punch and feeding the strip into the die station with a constant slot step distance progression to create a plurality of slots;

c) when a part feature is to be punched, deactivating the slot punch, activating the part feature punch, and feeding the strip with a new step distance which is different than the slot step distance; and

d) repeating steps b) and c) to create a pattern of slots and part features wherein progression of the part feature step distances is not evenly divisible by a progression of the slot step distances.

18. A method for manufacturing a straight strip lamination with a press, comprising the steps of:

providing in a press a die having in a direction of strip feed at least a slot punch, followed by a part feature punch which is followed by a separator punch;

providing a servo motor for feeding the strip into the die wherein a step distance can be changed depending on whether the slot punch and separator punch are being

activated, or whether the part feature punch is being activated, so that a step distance for the slot punch is different than a step distance for the part feature punch; and punching out the straight strip lamination by use of said die.